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AUTHOR Moulden, H.
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ABSTRACT

The results of a second year of experimentation in self-directed learning (SDL) of English for Special Purposes are presented. The experiment was carried out with a group of 13 intermediate level students at the "Ecole des Mines" in Nancy, France. Changes in the original strategy are described. In addition to communication exercises directed by a facilitator and work on an individual basis, once-a-week small group sessions were added. These sessions also followed the self-directed learning model. The results of the experiment are analyzed according to: (1) results of the questionnaire filled in at the end of the year by the participants, (2) certain results bearing on the SDL experiment obtained from a questionnaire filled in by all first and second year students in the school, and (3) some measurements made by the author during the experiment. It was found that generally students preferred this method of self-directed learning to the traditional one, finding it more effective and agreeable. (Author/AMH)

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H. MOULDEN

EXTENDING S.D.L. IN AN ENGINEERING COLLEGE : EXPERIMENT YEAR TWO

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RESUME

Cet article présente les résultats d'une deuxième année d'expériences dans une Grande Ecole d'Ingénieurs d'une stratégie d'apprentissage de l'anglais en semi-autonomie. La stratégie originale a été modifiée. Aux exercices de communication dirigés par animateur et au travail individuel semi-autonome a été ajouté un travail semi-autonome en petit groupe. Entre un tiers et deux tiers des étudiants de niveau moyen en anglais trouvent cette stratégie plus efficace et plus agréable à pratiquer (de 1,2 à 3 fois plus) que la méthode traditionnelle.

During the academic year 1978-1979 a small scale experiment in self-directed learning of English was carried out with a group of thirteen intermediate level students at the *Ecole des Mines* in Nancy. Normal classes (two sessions per week of two hours and one and a half hours) were replaced by two hours per week of individual self-directed work (students working on the objectives and materials of their choice when, where and how they pleased and seeing a helper for about twenty minutes once every two weeks) and one and a half hours per week of teacher-directed communicative activites in a group. Details of this experiment have already been published (Moulden, 1978 and 1979).

YEAR TWO

Objectives and changes in methodology

The objectives for the year and brief indications of the way in which it was attempted to reach each of them are listed below.

1 — To get the students to do more work than had been done in 78-79.
To give them more time for speaking together in English.
To alleviate the feelings of " loneliness " and " helplessness " reported during individual work.
(one hour per week of individual S.D.L. was replaced by one hour per week of S.D.L. in small groups)

2 — To cater more completely for the needs of individual students.
(acquisition or creation of suitable learning material)

3 — To do something about the charges of " time-wasting, occasional boredom and not enough chance to talk " levelled at the classroom sessions.
(" activity corner " system of working in small groups introduced and range of video-based problem-solving activities extended)

4 — To obtain more significant results than those of the previous year.
(experiment extended to four groups)

5 — To try to get more out of the system by applying it to a group which might derive more benefit from it than those so far experimented with.
(self-directed listening comprehension work with third year intermediate and advanced groups discontinued in order to work with a third year lower intermediate group whose need of improvement in listening comprehension was much greater)

6 — To measure the preparation time required of the helper.
(all project work timed)

7 — To obtain less ambiguous and more quantitative answers from the questionnaires.
(students invited to quantify their assessments on a 1 to 10 scale and to justify the figures they recorded)

Methods

This section will set out in greater detail the whys and hows of the methodological changes made in the hope of reaching the objectives mentioned above. Thus, it contains seven sections, each corresponding to one of the seven objectives for the year.

1 — one hour per week of individual S.D.L. was replaced by one hour per week of small-group S.D.L.

The idea for this change came from two of the students who suggested trying self-directed listening comprehension practice in twos or threes. This, they thought, might be more fun than working alone and might also reduce the incidence of " giving up in the face of insuperable problems " (on the principle that two or three heads are better than one and that those suffering from discouragement could be chivvied along by the others). It seemed to the writer that group-work might also embrace oral expression activities, which would perhaps reduce complaints about not having enough speaking practice. Also, since on average less than half the time allocated for individual work had been used in 78-79, it seemed just possible that cutting this time in half and offering a more stimulating activity for the remaining half of the time might result in a greater total volume of work being done.

Small-group-work functioned as follows : the students of two of the groups taking part in the experiment (see below under 4—) were asked, first of all, whether they wished to do individual work only or a 50/50 mix of individual work and small-group work. Nobody elected to work entirely alone. They were then asked to get themselves into groups of three or four (which gave 3 or 4 small groups per group) and each small group chose its first activity from a list of suggested activities which included decision-taking, technical and non-technical problem solving and design and creative work (see appendix I). Small groups who wished to invent their own activities could do so (none did). The small groups were told they were expected to do an average of about 50 minutes of

work per week and to record themselves at work. They were also asked to help/correct each other as much as possible, either during the activity or on listening to their cassette-recorded performance afterwards. Each group was to turn up for an interview of about 30 minutes every 3 weeks. The interviews were to be used to deal with linguistic and methodological problems arising during work, to see what had been learned, to give feedback on previously recorded work monitored by the helper and to find out what the group wanted to do next so that the material needed could be passed on to them.

2 — acquisition of creation of learning material for individual work.

During the first year of the project a large disparity between the sort of material students required and what was actually available was observed. This gap will take a lot of filling. Work done in this direction during 79-80 included :

a — Searching for reading material for students with special interests and making bibliographies for each kind of subject matter.
b — Making off-air audio-cassettes from B.B.C. broadcasts to meet students' interests.
c — Searching for reading material to accompany the cassettes.
d — Making scripts for cassettes.
e — Creating functional modules.
f — Recording cassettes to accompany functional modules.
g — Inventing simulations for practicing specific oral expression activities.
h — Searching for scripted cassettes and cassette-recorded courses suitable for listening comprehension practice for the lower intermediate group.

3 — Class : activity corner system of working in small groups introduced and range of video activities extended.

Of the three criticisms directed at the classroom session 78-79, that of timewasting was the most easily remedied (by being brisker, better organized and rigorously excluding all but very short reading and listening activities). As for the criticism that there was not enough chance to speak during the class, the policy was to concentrate on the small group work and video activities which had been introduced too late in 78-79 to avoid this reproach. Thus, for each class, several different small group activitles were provided and groups of 3 or 4 students went from one activity (corner) to another. In one class, for example, one group worked on a Lego model reproduction task, another on a video film-making activity while a third group tackled a video-based technical problem. A new video activity was tried out most weeks. It was felt that not much could be done about the vague remarks concerning occasional boredom in 78-79. You can't please everybody all the time.

4 — Experiment extended to four groups

The experiment carried out in 78-79 involved only thirteen intermediate level students so it would be imprudent to extrapolate these results to the 70 odd students of this level at the Ecole des Mines and even more imprudent to make any pronouncements concerning the total of 180 students doing English there. In addition, the distribution of answers given to question one of the 78-79 questionaire (where the students were asked to weigh the experimental method against the traditional method in terms of progress made) gives a X^2 (3.84) which indicates that the results are not up to statistician's " probably significant " level and are, in fact, uncomfortably below this level. Hence the involvement in 79-80 of four groups of students (total of 45 students). The larger the numbers involved, the better the chance of getting statistically significant results.

Ten of these students, however, were unusable or of limited use for questionnaire purposes. Two did little or no work during the year (and did little or no work under the traditional system during the previous year). Three had already done S.D.L. in the 78-79 experiment. Five had never done English before at the college.

To these ten must be added three more students who returned no questionnaire, giving a total of thirteen unusable students.

So the effective 79-80 sample was 32 students, which gives a total sample over the two years of the project so far of 45 students. This size of sample seemed likely to give more reliable results than those obtained in the first year of the project.

The nature of the 4 groups and brief information on their activities during the year is given below.

First year intermediate group : 12 students. Did English the traditional way during the first half of the year (2 x 2 h. class per week). For the remainder of the year they continued to do 2 h. per week traditional class plus 50 minutes per week of individual S.D.L. plus 50 minutes per week of small group S.D.L. Individual interviews of 20 minutes once every 3 weeks. Small group interviews of 30 minutes once every 3 weeks. All skills practiced in S.D.L. The writer looked after the S.D.L. and one of the weekly classes during the first half of the year.

Second year intermediate group : 12 students. One class of 1.5 hours per week. 50 minutes per week individual S.D.L. and 50 minutes small group S.D.L. Individual interviews of 30 minutes every 3 weeks (in theory). Small group interviews of 30 minutes every 3 weeks (in theory). In practice the class and interview timetable was constantly " holed " by holidays, strikes, teacher absence (illness or attendance at conferences) and by pillaging of English hours by technical staff. The writer looked after this group on his own.

Third year intermediate group : 12 students. 1.5 hours class per week (traditional style). 1.5 hours individual S.D.L. per week. This group was looked after by a teacher who had become interested in S.D.L. through casual listening-in to parts of the 78-79 experiment and who wished to try it for himself (Ian Woodcock). Such was his enthusiasm that students got at least half an hour of interview and sometimes quite a bit longer. The formula for individual work seemed to be work on a cassette at home followed by free-ranging discussion with the teacher using the cassette as a starting point plus injection of linguistic information.

Third year lower intermediate group : 9 students. Much weaker than the three other groups. 1.5 hours traditional class per week. 1.5 hours individual S.D.L. (listening comprehension only). 20 minutes interview every 2 weeks. Group looked after by the writer.

5 — Self-directed listening comprehension work with third year intermediate and advanced groups dropped and transferred to a third year lower intermediate level group.

After four years of self-directed listening comprehension work with third year intermediate and advanced groups, it had eventually dawned on the writer that despite the general opinion of these students that S.D.L. was more effective than their work in class, the fact remained that they were not taking full advantage of the service offered, as the available class and S.D.L. attendance figures show. (Absence from an interview was never found to be due to a student having worked conscientiously and having encountered insufficient problems to warrant not seeking help).

Year	Average % attendance in class	Average % attendance at S.D.L. interviews
74-75	50	67
75-76	49	50
78-79	40	56

Teachers working with groups of students at beginner and post-beginner levels reported attendance figures for classes of between 70 % and 95 % even in third year. It seemed likely that self-directed listening comprehension practice would do more good with students who were keener and who had more to learn than the intermediate level and advanced level students who seemed to need speaking practice rather than listening practice. Thus it was that atten-

tion was turned away from third year intermediate and advanced groups and towards a third year group with only 2 or 3 years of English at most behind them and who were said to be fairly keen.

6 — Preparation work for the project timed.

The preparation involved in the 78-79 experiment had not been felt to be excessive but this was a purely subjective estimate, and not of much use to anyone contemplating doing similar work.

7 — Modifications to questionnaire.

These were chiefly aimed at quantifying the *more* or *less* assessments made by students and probing the reasons for the assessments made. A questionnaire typical of those used in the second year of the project is given in Appendix II.

Results

This section falls into three parts. The first part concerns the results of the questionnaire filled in at the end of the year by the participants in the experiment. The second part concerns certain results bearing on the S.D.L. experiment obtained from the " unit credit system questionnaire " which was filled in by the entire first and second year at the Ecole des Mines. The third part contains one or two measurements made by the writer during the experiment.

Results of the questionnaire

1 — Students' assessments of the progress they made with the S.D.L. method and with the traditional method.

Of the 45 intermediate level students who tried out the S.D.L. method during the period 1979-1980 and who were in a position to compare it with traditional English teaching at the Ecole des Mines, 43 gave an estimate of the relative merits of the two methods with respect to the progress they felt they had made with each :

23 students felt they had made more progress with the S.D.L. method (53 %)
17 students felt they had made comparable progress with the two methods (40 %)

3 students felt they had made less progress with the S.D.L. method (7 %) (Progress ratios between 0.8 and 1.2 were counted as " comparable progress ").

Statistically speaking, these results are highly significant, i.e. the probability of them having been produced by chance is less than 1 in 1000. To what degree results obtained with 43 students can be considered to be representative of a population of 220 or so intermediate level students over the period considered is not known, but it may be possible to get information on this point using statistical methods (Calculation of confidence limits). The matter is being investigated. Meanwhile, there seems to be a fair chance that the results *are* representative of all the intermediate students. 43/220 is a decent sized slice and the distribution of more/equal/less answers was roughly the same in each of the 5 groups constituting the sample of 43.

In the majority of cases the students were simply asked to say which of the methods they felt to be superior to the other, but the first year intermediate group was asked to say how much better the preferred method was felt to be. The results for this group of 12 students are given in Fig. 1.

2 — Students' assessments of pleasure experienced with the S.D.L. method and with the traditional method.

29 students enjoyed the S.D.L. method more than the traditional method (67 %)
11 students enjoyed the S.D.L. method as much as the traditional method (26 %)
3 students enjoyed the S.D.L. method less than the traditional method (7 %)
(Pleasure ratios between 0.8 and 1.2 were counted as " as much as ").

Again, these results are highly significant statistically (the probability of their having arisen by chance being well below 1 in 1000) and again, the question of how representative they are of the intermediate population remains to be settled.

Quantitative results for the first year intermediate group are given in Fig. 2.

From the foregoing, then, it seems likely that a substantial proportion (at least half) of the students at intermediate level in English at the Ecole des Mines feel not only that self-directed learning of Engish leads to more progress than does the traditional method, but also that it is more fun done this way. If the first year intermediate group is typical, " more " means 1.5 to 3 times more. (We shall see later that this range of values is, in fact, typical). Although we are dealing here with the student subjective estimates of pro-

gress/pleasure in the 2 methods, it might be argued that when " more " progress is felt to be 1.5 to 3 times more progress then serious attention must be paid to such impressions of methodological superiority.

It may also be worth remarking that only a very small proportion of the sample of students investigated (7 %) found the S.D.L. method less effective and less pleasant than the traditional method.

3 — Students' assessments of the relative merits of individual S.D.L., small group S.D.L. and the traditional classroom method, judged on the criterion of the progress they felt they had made.

Quantitative information on this point was obtained from both the groups who worked in these three ways during the year 79-80 (first and second year intermediate groups).

Individual S.D.L. versus traditional work in class

1st year intermediates

More progress with individual S.D.L. than with traditional method 9/12 (75 %)
Same progress with individual S.D.L. as with traditional method 3/12 (25 %)
See Fig. 3 for details.

2nd year intermediates

More progress with individual S.D.L. than with traditional method 4/11 (36 %)
Same progress with individual S.D.L. as with traditional method 5/11 (45 %)
Less progress with individual S.D.L. than with traditional method 2/11 (19 %)
See Fig. 4 for details.

Small group S.D.L. versus traditional work in class

1st year intermediates

More progress with small group S.D.L. than with traditional method 5/12 (42 %)
Same progress with small group S.D.L. as with traditional method 3/12 (25 %)
Less progress with small group S.D.L. than with traditional method 4/12 (33 %)
See Fig. 5 for details.

2nd year intermediates

More progress with small group S.D.L. than with traditional method 3/10 (30 %)
Same progress with small group S.D.L. as with traditional method 1/10 (10 %)
Less progress with small group S.D.L. than with traditional method 6/10 (60 %)
See Fig. 6 for details.

Once again, all the percentages given in the above section were calculated by taking progress ratios between 0.8 and 1,2 as " same progress ".

Individual assessments of progress made with the traditional method, small group S.D.L. and individual S.D.L. were totalized separately for the first and second year intermediate groups. The table below compares total progress made in each group with each of the two S.D.L. methods and that made with the traditional method.

	Traditional Method	Small group S.D.L.	Individual S.D.L.
First year Intermediates	1.0	1.1	1.5
Second year Intermediates	1.0	0.8	1.2

The above results, obtained on a 20 % sample of the 79-80 students at intermediate level in English

a - suggest that a substantial proportion (8/23 = 35 %) of intermediate students feel that *both* individual S.D.L. *and* small group S.D.L. lead to substantially more (1.2 to 3.0 times more) progress in English than does the traditional method.

b - show that, *on average*, individual S.D.L. is felt to be more effective for making progress than is small group S.D.L. (about 1.5 times more effective).

c - show that, on the whole, S.D.L. (and particularly small group S.D.L.) was less appreciated progresswise (as compared with classroom work) by the second year intermediate group. It is thought that this may be due to : 1) the fact that (thanks to a colossal oversight in the questionnaire given to this group) the group were not comparing their S.D.L. experience with a normal class but with a classroom session designed to counterbalance the isolation of individual S.D.L. by being as stimulating and interactive as possible. Although the class was innocent

of any preplanned pedagogic content — being intended merely to encourage the listening to and speaking of English — over half the students in the group found the class as instructive or more instructive than S.D.L. 2) the fact that this group has more difficulty in working in small groups because of its greater number of unmotivated students and timetable incompatibilities arising from the diversification of technical studies which takes place in second year.

The third year lower intermediate and intermediate groups compared progress made with individual S.D.L. and the traditional classroom method. Results were as follows.

Third year lower intermediate group

More progress with individual S.D.L. thar with traditional method 5/8 (63 %)
Same progress with individual S.D.L. as with traditional method 3/8 (37 %)

Third year intermediate group

More progress with individual S.D.L. than with traditional method 4/7 (57 %)
Three questionnaires not returned.

Taking these results in conjunction with those for the 79-80 first and second year intermediate groups and those for the 78-79 second year intermediate group, it can be seen that in the 5 intermediate level groups so far investigated approximately 1/3 to 2/3 of each group find individual S.D.L. more effective than the traditional method.

4 — Students' assessments of the relative enjoyableness of individual S.D.L. ; small group S.D.L. and traditional work in class.

As in the previous section, only the first and second year intermediate groups gave information on this point (see over).

Individual S.D.L. versus traditional work in class

1st year intermediates

Individual S.D.L. more enjoyable than traditional method 5/12 (42 %)
Individual S.D.L. as enjoyable as traditional method 4/12 (33 %)
Individual S.D.L. less enjoyable than traditional method 3/12 (25 %)
See Fig. 7 for details.

2nd year intermediates

Individual S.D.L. more enjoyable than traditional method 3/11 (27 %)
Individual S.D.L. as enjoyable as traditional method 2/11 (18 %)
Individual S.D.L. less enjoyable than traditional method 6/11 (55 %)
See Fig. 8 for details.

Small group S.D.L. versus traditional work in class

1st year intermediates

Small group S.D.L. more enjoyable than traditional method 6/12 (50 %)
Small group S.D.L. as enjoyable as traditional method 2/12 (17 %)
Small group S.D.L. less enjoyable than traditional method 4/12 (33 %)
See Fig. 9 for details.

2nd year intermediates

Small group S.D.L. as enjoyable as traditional method 5/10 (50 %)
Small group S.D.L. less enjoyable than traditional method 5/10 (50 %)
See Fig. 10 for details.

Individual assessments of pleasure experienced with the traditional method, with small group S.D.L. and with individual S.D.L. were totalized separately for the first and second year intermediate groups. The table below compares total pleasure experienced in each group with each of the two S.D.L. methods and that experienced with the traditional method.

	Traditional Method	Small group S.D.L.	Individual S.D.L.
First year Intermediates	1.0	1.1	1.1
Second year Intermediates	1.0	0.7	8'0

The above results, obtained on a 20 % sample of the 79-80 students at intermediate level in English

a - suggest that a substantial proportion (8/23 = 35 %) of intermediate level students feel that individual S.D.L. is a more pleasant activity (1.2 to 3.0 times more) than traditional classwork.

b - suggest that a substantial proportion of intermediate level students will enjoy small group S.D.L. more than traditional classroom work provided that the groups are fairly homogeneous in terms of motivation and have a reasonable choice of working times. (6/12 = 50 % of the first year group found small group S.D.L. pleasanter than traditional classwork, but nobod, in the second year group where the above conditions were not fulfilled found small group S.D.L. pleasanter than classwork... although, once again, the classwork in question was not, perhaps, typical of traditional classwork).

c - show that, on average, there is not much difference between the amount of pleasure experienced in individual S.D.L. and that found in small group S.D.L.

The third year lower intermediate and intermediate groups compared enjoyability of individual S.D.L. and the traditional method. Results were as follows :

Third year lower intermediate group

Individual S.D.L. more enjoyable than traditional method 6/8 (75 %)
Individual S.D.L. as enjoyable as traditional method 2/8 (25 %)

Third year intermediate group

Individual S.D.L. more enjoyable than traditional method 4/7 (57 %)

Taking these results in conjunction with those for the 79-80 first and second year groups (intermediate level) and those for the 78-79 second year intermediate group, it can be seen that in the 5 intermediate level groups so far investigated approximately 1/3 to 2/3 of each group find individual S.D.L. more enjoyable than the traditional method.

5 — Students' observations on positive and negative aspects of individual S.D.L., small group S.D.L. and the traditional method.

The percentages indicate the proportion of students who spontaneously made the remark in question.

Individual S.D.L. ; positive aspects

Advantage of being able to choose one's own objectives and working material : can concentrate on weak points, can have more variety, work chosen by oneself means more pleasure, more work and more progress	66 %
Being able to choose when one works and for how long at a time	54 %
Individual S.D.L. is the best way for making progress	46 %
Individual S.D.L. makes you work because you know you have to give a regular account of what you're doing. You can't pretend to work	37 %
You can work at your own speed, go back over things you haven't properly understood	29 %
Interviews useful/pleasant because of personal attention and chance of prolonged conversation	19 %

Individual S.D.L. ; negative aspects

Motivation necessary for progress	26 %
Not much fun working on your own	11 %
Discouraging when you get stuck on a problem (comprehension of cassette recording)	11 %
Interview too short	11 %
Insufficient choice of recorded material (Only 3rd year lower intermediate group made this last complaint)	11 %

Small group S.D.L. ; positive aspects

Particularly good for practicing speaking English. (You have to speak. Real discussions. Feel more motivated/less reticent than in class)	73 %
Relaxed atmosphere	41 %
Mutual aid/correction	32 %
Freedom to work when we want to	23 %
Freedom to choose work done	18 %

Small group S.D.L. ; negative aspects

Trouble getting everybody together at same time	45 %
Motivation necessary	41 %

Traditional classroom method ; positive aspects

Very little explicit information on this point was obtained from the questionnaires (there was no question concerning it). 4 students (11 %) mentioned that it was useful to have a teacher on hand for instant correction of faults and supplying of vocabulary and one student thought that teacher directed learning ensured learning.

Traditional classroom method ; negative aspects

Despite the absence of questions on this point, remarks on the subject were made in passing.

Boring subjects and unprofitable linguistic content	29 %
Don't feel involved. No need to work. Wait for teacher to do it	17 %
Not enough chance to speak (size of group/shyness)	11 %

The above results show

a - that the theoretical advantages of the S.D.L. system tried out were appreciated by a substantial proportion of the intermediate level students who where involved.

b - that the small group S.D.L. idea has potential interest for intermediate level students wishing to practice speaking English.

c - but that motivation is a prerequisite for success. It may be that the students who find no particular advantage in S.D.L. are simply the less motivated ones.

6 — Students' assessments of progress made in reading comprehension, listening comprehension, and speaking English with traditional classroom method, with small group S.D.L. and with individual S.D.L.

The following tables were derived from the answers given to Question 4 in the questionnaire given in Appendix II and concern the first and second year intermediate groups.

First year intermediate group

	Average progress per student during class	Average progress per student during small group S.D.L.	Average progress per student with individual S.D.L.
Reading Comprehension	0.8	0.5	1.3
Listening Comprehension	1.5	1.5	2.5
Speaking	0.9	1.7	1.7

Second year intermediate group

	Average progress per student during class	Average progress per student during small group S.D.L.	Average progress per student with individual S.D.L.
Reading Comprehension	0.8	0.8	1.6
Listening Comprehension	1.8	1.2	1.9
Speaking	2.0	2.1	1.2

The figures given in the tables above have no absolute meaning. They are, however, meaningful when compared with one another. It will be noted that, for the first year intermediate group, in 5 cases out of 6 the average progress made in S.D.L. was equal to or greater than that made using the traditional method.

In the case of the second year intermediate group, equal or greater progress was made in S.D.L. in four cases out of six. (Cases = skills here).

The above tables allowed an internal cross check of the consistency of the students' assessments to be made. A previous question had asked the students to quantitatively assess global progres in English in the 3 modes-classroom/small group S.D.L./individual S.D.L. The question from which the above tables were compiled asked the students to carry out the same operation but in greater detail ; this time, global progress had to be broken down into tne constituents : reading, listening, speaking. Summing of the individual answers to these two questions gave the following results :

First year intermediate group

	Traditional Method	Small group S.D.L.	Individual S.D.L.
Sum of individual global progresses	1.0	1.2	1.7
Sum of average individual progresses in reading, listening, speaking	1.0	1.1.	1.5

Second year intermediate group

As above...

1.0	0.9	1.0
1.0	0.8	1.2

The fair degree of agreement suggests that the students were answering consistently. (The calculation involved some rather gross assumptions however).

Some results from the " Unit credit system " questionnaire filled in by all first and second year students

Towards the end of the academic year 79-80, a questionnaire was circulated among the first and second year students in order to obtain information on the feasibility of mounting a unit-credit system of language learning at the Ecole des Mines. Within certain limits students would be free to compose a 3 year language learning " menu " from 12 units offered in each of the languages taught at the School, each unit corresponding to a certain language skill. The students were asked to say which units they would envisage doing and when. Advantage was taken of this questionnaire to append a question asking students to state which units in English they would like to work on in the self-directed mode (if any). It was hoped to obtain a) a large scale indication of the attitude towards S.D.L. of students who had never practiced it before b) of the attitude towards S.D.L. of the students who had tried it out during the year. The greater part of the first and second year students replied to the questionnaire and the results concerning S.D.L. are given in the table overleaf which compares the answers given by the two above types of student in first year and in second year. The figure appearing in each square is the value of the ratio between the number of times the type of students concerned asked to do that particular unit semi-autonomous and the number of times the unit was requested by that type of student, whether the request was for classroom or semi-autonomous treatment.

One or two observations may be made concerning this table.

Firstly, it will be noted that, in most cases, there is a considerable difference between the for or against S.D.L. choices made by the two types of student ;

those who have already tried S.D.L. being much readier (from 2 to 8 times more often))to use it than those who have not tried it (which, it might be argued, provides some sort of retrospective justification for inflicting S.D.L. on the students). The differences observed are statistically significant, there being a probability of less than 1 in a thousand that the first year differences were produced by chance and an approximately 1 in 500 probability that the second year differences were produced by chance. Half of the students who had tried S.D.L. reported that they filled in the questionnaire in the belief that the installation of the unit-credit system would mean the introduction of tests. This would seem to be a guarantee of 50 %of the votes for S.D.L. corresponding to a real belief in the efficacy of the system.

Secondly, as might be expected, the variation from unit to unit of the figures for the students who had never tried S.D.L. is slight (averaging the figures for both years gives a range of from 0.10 to 0.23). The variation for the students who *had* practiced S.D.L. is much greater (0.14 to 0.65) showing that experience of S.D.L. had led to certain skills being perceived as being more or less efficiently learned in the S.D.L. mode. The 12 units are listed below in order of decreasing popularity with respect to S.D.L.

Unit	Average choice frequency
Basic language functions (oral)	0.65
Advanced reading comprehension	0.58
Global listening comprehension	0.57
Reading comprehension (beginners)	0.50
Grammar	0.50
Detailed listening comprehension	0.44
Intensive listening comprehension	0.39
Writing abstracts/memoranda	0.36
Writing letters/telegrams/C.V.	0.34
Civilisation	0.21
Taking part in meetings/dealing with visitors	0.15
Giving a talk	0.14

The sequence is much as might be expected with fully fledged speaking skills at the bottom of the list and more passive activities above.

Some information which does not appear in the preceding table is the following : 18 of the 19 students having tried S.D.L. who replied to the unit-credit questionnaire chose to do at least one unit semi-autonomously and one student chose to do 8 of the 12 units semi-autonomously. The others chose as follows.

Units out of 12 to be done semi-autonomously		Number of students asking to do this number of units semi-autonomously
0		1
1		3
2		2
3		4
4		2
5	average	5
6	of 3.5	1
7	units out	0
8	of 12	1

Thus, the attitude of the students towards S.D.L. versus class work shows no clear one or the other split (except in one case). The two are seen as complementing one another, but not everyone agrees on the best composition of the mixture.

There is somewhat of a contrast between the above choices and the progress with S.D.L. reported by the same students when answering the writer's questionnaire. Nine of them (39 %) claimed to have made substantially greater progress with S.D.L. than in the classroom. Yet the nine students with the highest S.D.L. choice frequency only chose to do between 1/3 and 2/3 (the majority around 1/3) of the unit credit programme in the self-directed mode. Now the unit-credit system is not really compatible with fully self-directed learning since the objectives are, for the most part, imposed from the outside. So the students may have judged that under these conditions much less progress would be made and that, personal choice being restricted, it might be easier in most cases to go along to the classroom and have the work served up on a plate by a teacher who could always be blamed if things went wrong. But the niggling possibility that the threat of institutional scrutiny of progress brought about a more sober evaluation of the worth of S.D.L. remains.

WRITER'S OBSERVATIONS 79-80

Amount of work done by the students

The class presence figures are reliable. The figures for individual and small group work are partly measured (interview lengths/work recorded on cassette) and partly " guesstimates ", but may be compared with last year's guesstimates as the same method was used.

First year intermediate group :

Hours of presence in class/theory hours of presence in class ..... 90 %
Hours work done in small group S.D.L./theory hours ..... 50 %
Hours work done in individual S.D.L./theory hours ..... 90 %
Hours work done in S.D.L./theory hours ..... 66 %

Second year intermediate group :

Hours of presence in class/theory hours ..... 80 %
Hours work done in small group S.D.L./theory hours ..... 57 %
Hours work done in individual S.D.L./theory hours ..... 61 %
Hours work done in S.D.L./theory hours ..... 59 %

Third year lower intermediate group :

Hours of presence at S.D.L. interviews/theory hours ..... 78 %

Third year intermediate group :

5/12 students reported they had done more work with S.D.L. than with traditional classwork in the two previous years. The teacher felt students were doing 4-5 times more.

Amount of preparation work done by writer

First year intermediate group : 2.2 hours per hour of interview (2 hours interview per week).
Second year intermediate group : The figure obtained is being reexamined as it seems rather low. True figure probably around 2 hours per hour of class and interviews (3.5 hours class/interviews per week).
Third year lower intermediate group : 1.3 hours per hour of interview (1.5 hours interview per week).

WERE THE 79-80 OBJECTIVES REACHED ?

Objective 1 a :

To get the students to do more work than had been done in 78-79.
This objective was reached as the figures below show.

Second year intermediate group 78-79 : hours of S.D.L. work done/theory hours ..... 40 %
First year intermediate group 79-80 : hours of S.D.L. work done/theory hours ..... 66 %
Second year intermediate group 79-80 : hours of S.D.L. work done/theory hours ..... 59 %

The number of S.D.L. work hours required was identical in both years.

Objective 1 b :

To give the students more time for speaking English together.
This objective was reached although the time available for the second year group was considerably reduced by strikes, public holidays, teacher illness etc.

Second year intermediate group 78-79 : Hours available = 243 ; hours used = 168 ; 69 % hours used.
First year intermediate group 79-80 : Hours available = 327 ; hours used = 240 ; 73 % hours used.
Second year intermediate group 79-80 : Hours available = 227 ; hours used = 192 ; 71 % hours used.

Objective 1 c :

To alleviate feelings of " loneliness " and " helplessness " reported during individual work.

Complaints about individual S.D.L. not being stimulating were halved but those about discouragement actually increased by half. At least, the time during which students were asked to expose themselves to these horrors was reduced by 50 %.

Objective 2 :

To cater more completely for the needs of individual students. The writer felt that he was giving much better service here than in the first year of the experiment (except in the case of the third year lower intermediates where it was difficult to find scripted listening comprehension material which was interesting and not too taxing). Numerous students made appreciative remarks on their questionnaires concerning the work they had done individually and the percentage of time allotted to individual work which was actually used rose from 40 to 60 (second year) and 90 (first year).

Objective 3 :

To do something about charges of " timewasting, occasional boredom and not enough chance to talk " levelled at the classroom session. The objective was reached, as a comparison of student remarks on the class sessions this year and last year shows :

78-79		79-80	
Praise of video activities	62 %	Praise of video activities	90 %
Not enough chance to talk	54 %	Praise for talking facilities e.g. « à chaque fois nous étions quasiment sûrs de trouver 1 cours original et motivant qui permet en plus d'apprendre de nouvelles choses et surtout de discuter continuellement en Anglais ».	60 %
		Praise of relaxed atmosphere	60 %
		Praise of variety of content	60 %
Occasional boredom	15 %	Occasional boredom	9 %
Timewasting	23 %	Timewasting	0 %

Objective 4 :

To obtain statistically more significant results than the year before.

Insufficient time was available to submit all quantitative results to statistical analysis, but the more important ones have been found to be statistically significant (thanks to the larger sample taken over 2 years). The question of confidence limits has yet to be gone into, however.

Objective 5 :

To get more out of the system by applying it to a group which might derive more benefit from it.

If serious work may be equated with benefit, then this objective was reached. The attendance rate and work done by the lower intermediate group were an improvement on the efforts of third year intermediate and advanced groups in previous years. Interview attendance rates for the latter of 56 %, 50 % and 67 % were recorded ; the former attended at 78 %. Observation of third year intermediate and advanced groups doing self-directed listening comprehension work had shown that a third of them were working fairly cons-

cientiously (but still not doing the theoretical quota), that another third were doing just about enough to keep out of hot water and that the remaining third were doing practically nothing. Of the 9 students in the [illegible]0 lower intermediate group (whose need of listening comprehension p[illegible] was palpably greater than that of their predecessors) five regularly did the number of hours of work required or more and in exemplary fashion, three just kept out of trouble and one did nothing. Those who really worked reported that the self-directed work they did was between 1.5 and 3 times more intense than classwork (the same range of " more " factors as those reported by the first and second year groups when assessing progress with S.D.L. as compared with the traditional method).

Objectives 6 and 7 :

Concerning quantification of teacher preparation time and of students' assessments of the experimental method, were also attained as the results section for 79-80 shows.

CONCLUSION AND PLANS FOR FURTHER WORK

This project seeks answers to the following questions :

— Could S.D.L. lead to better learning of English at the Ecole des Mines than the method in force ?

— If so,
  - how much better ?
  - for what proportion of the students ?
  - which students ?

and
  - what form(s) of S.D.L. would give best results ?

If the results obtained so far on a 20 % sample of intermediate level students are representative of the total population of intermediate level students, then ; a blend of whole group communication session, small group S.D.L. and individual S.D.L. would be found to be from 1.2 to 3 times more effective/ pleasant by 1/3 to 2/3 of these students. Of the 3 constituents of the blend, individual S.D.L. would be found to lead to the greatest progress in most skills, but the other 2 would be found to complement it by providing the human contact and interaction practice missing in the first. Motivation would be a prerequisite for success.

The English learned by these students is not subjected to compulsory external assessment. The results of the unit-credit questionnaire suggest that the students might be less keen on S.D.L. (choosing to do only a third of their work in this mode) if their progress *were* to be tested.

Nevertheless, this seems to be an encouraging start.

Looking to the future, there is plenty of scope for further investigation and improvement. For example, 3 points which might be investigated are :

— what might be done S.D.L.-wise for students either side of intermediate level ?

— what might be done to obtain a more objective comparison of S.D.L. with the traditional method ?

— is the classroom session with the teacher necessary ?

Features of the S.D.L. " method " which need improving are :

— the way the helper's time and patience (and that of the interested students) is wasted by the unmotivated students

— the shortness and/or too wide spacing of interviews

— the lack of attention paid so far to serious long term planning of individual objectives and student evaluation of progress towards these objectives

— the lack of material (especially for small groups and lower level students)

Efforts to deal with some of the above in 80-81 will take the following form :

— an attempt will be made to get all students to define long term objectives in a precise, verifiable manner and to regularly fill in work-sheets recording and evaluating work and progress.

— work with students whose level in English is too high to allow of them doing English at the Ecole. *Volunteer* students will keep up their English in a S.D.L. mode to be determined by consultation with them (probably a mix of fully autonomous small group work, individual S.D.L. but *no* classroom session).

— Investigation of a slightly modified form of the S.D.L. method used in 79-80, this time with a first year *volunteer* group. Comparison of the work of this group with a control group following a syllabus taught by the traditional method. Suppression of small group interview (feedback by cassette/letter) so as to gain more time for individual interviews. Search for additional small group activities.

— Continued investigation of a third year lower intermediate group but extending S.D.L. to all skills. Search for more suitable material for work at this level.

APPENDIX I

ACTIVITIES FOR SEMI-AUTONOMOUS SMALL GROUPS

Decision taking

1 — Dilemma and decision : a dozen management case studies requiring the taking of a decision.
2 — Decision-taking : Another 15 management problems to solve.
3 — Action Mazes : Sequential decision-taking activities. Each decision leads to a further problem. Try to get out of the problem area as quickly as possible. Gives practice in quick reading.

Priority ordering

4 — Try to come to a decision on the relative importance of factors concerned in job satisfaction. List of factors supplied.
5 — As above but with " happiness " as the subject.
6 — On the moon : You are marooned on the moon with 15 items of equipment. Order the items according to usefulness.
7 — Nuclear Shelter : There's not room for everybody. Decide who will be sent out to die.

Listening or Viewing comprehension

8 — Work on any cassette you fancy.

Technical problem solving

9 — You will be shown a short video sequence showing a machine in action. Discuss a plausible modus operandi for the machine and present your ideas in the form of a lecture.
10 — You will watch a video sequence showing an apparatus in action but you will not be able to hear the commentary of the person demonstrating the apparatus. Discuss together what the appartus does and how it works.

Design

11 — The " animateur " will give you something to design or re-design.

Non technical problem solving

12 — Pros and cons : Cassette recordings of a radio programme where you hear the start of a simulated confidence trick which has actually taken place. You have to guess who is conning who and how.
13 — Video Jigsaw : You are given (separatey) sound and vision fragments from a film. You have to match the fragments, find the order they occurred in and suggest a plot for the whole film.

Using imagination

14 — Front page : You are given (unconnected) headline fragments to reassemble. You invent a story to go with each headline and produce a newspaper front page featuring these stories.
15 — Sounds Interesting : Cassette with a collection of sound sequences. You invent a story to go with the sequence.
16 — Variations on a theme : Cassette with short ambiguous extracts from conversations. You have to speculate on the situation which led up to the conversation and try and provide a beginning and end for it.
17 — Reconstitute a poem or song from the last words of each line. Do the same for a novel from just 5 pages taken at random.
18 — Using video microphone and/or camera :
Make a new sound track for a video sequence.
19 — Make a commercial for a real or fantasy object.
20 — Do a sketch/play/concert.
21 — Film a technical project.
22 — Make and investigate the behaviour of some hexaflexagons. Instructions given. You will need a ruler, paper and glue.
23 — 18 mathematical puzzles to solve.
24 — Video-puzzle *Father dear Father.* Four extracts from 2 different stories in the *Father dear Father series.* 3 extracts go together but one extract doesn't belong. Sort it all out.
25 — If you've done n° 13 *Video jigsaw*, you could design a new video jigsaw starting from some other film.

APPENDIX II

QUESTIONNAIRE GIVEN TO FIRST YEAR INTERMEDIATE GROUP

Please complete this questionnaire :

— in FRENCH
— as completely and frankly as possible.
(There is no need to put your name on the questionnaire).

Don't hesitate to consult me if there's any problem.

1 — A few weeks ago, most of you filled in a questionnaire concerning the possible organisation of a *système d'unités de valeur capitalisables* in foreing languages at the *Ecole des Mines.*

At the time when you answered the questionnaire about the *système d'unités de valeur capitalisables,* did you suppose that obtaining each *unité de valeur* would depend upon being successful in a test or tests of some sort ?

YES ☐ NO ☐

2 — Try to evaluate what progress you have made in English this year with each of the three learning modes employed. By " the three learning modes " is meant :

— Classroom work
— Semi-autonmous work in small groups + interviews
— Semi-autonomous work on your own + interviews

Using the boxes below :

a - Award 10 points to the learning mode in which you feel you have made *most* progress. (If you feel you have made equal progress in 2 or in all 3 modes, then award 10 points to each).

b - Award 0 points to any learning mode in which you feel you have made *no* progress.

c - Using the 0 to 10 scale defined in a and b above, award from 1 to 9 points to any learning modes which you have not yet evaluated in terms of the progress you feel you made in them.

Classroom work	Semi-autonomous work in small groups plus interviews	Semi-autonomous work on your own plus interviews
☐	☐	☐

3 — What do you think are the reasons for the progress or lack of progress you made in each of the 3 learning modes (see the answer you gave to the last question) ? Please try to answer as clearly and completely as possible. *To whom it may concern :* Don't forget that frequent absences from class or doing very little work can be reasons for making little or no progress.

4 — Complete the table below so as to give a measure of the progress you feel you have made in the 3 language skills (reading comprehension, listening comprehension, speaking) in the 3 different learning modes used this year. To complete the table, use the 0 to 3 scale defined below :

Ø = I didn't practice this skill in this mode.

O = I practiced this skill in this mode.
I made no progress at all.

1 = I practiced this skill in this mode.
I made a little progress.

2 = I practiced this skill in this mode.
I made moderate progress.

3 = I practiced this skill in this mode.
I made a lot of progress.

	Classroom work	Semi-autonomous work in small groups	Semi-autonomous work on your own
Reading Comprehension			
Listening Comprehension			
Speaking			

Now complete the following table to show how much progress you feel you made in the acquisition of (recognition and ability to use) grammar, vocabulary and functions. Use the 0 to 3 scale defined above.

	Classroom work	Semi-autonomous work in small groups + interviews	Semi-autonomous work on your own + interviews
Grammar			
Vocabulary			
Functions (Saluer, s'excuser, se plaindre, etc.)			

5 — What do you think are the reasons for the progress or lack of progress you recorded in the two tables in the last question ? Please try to answer as clearly and completely as possible.

To whom it may concern : Don't forget that frequent absences from class or doing very little work can be reasons for lack of progress.

6 — Evaluate each of the 3 learning modes used this year in terms of the pleasure they gave you. Use the 0 to 10 scale defined in question 2.

Classroom work	Semi-autonomous work in small groups plus interviews	Semi-autonomous work on your own plus interviews
☐	☐	☐

7 — Explain as clearly and as completely as possible the reasons for the evaluation you made in the last question.

8 — What did you find *good* about semi-autonomous learning in small groups ?

9 — Were there any semi-autonomous small group activities (e.g. Action Mazes, Pros and Cons, Dilemma and Decision, audio-/video cassettes for comprehension, etc. etc.) which you found particularly enjoyable ? If so, which ?

10 — What did you find *bad* about semi-autonomous learning in small groups ?

11 — Were there any semi-autonomous small group activities which you found particularly disagreeable ? If so, which ?

12 — Have you any suggestions to make concerning semi-autonomous learning in small groups ?

13 — What did you find *good* about *individual* semi-autonomous learning ?

14 — What did you find *bad* about individual semi-autonomous learning ?

15 — Have you any suggestions to make concerning individual semi-autonomous learning ?

16 — Any other observations or suggestions ?

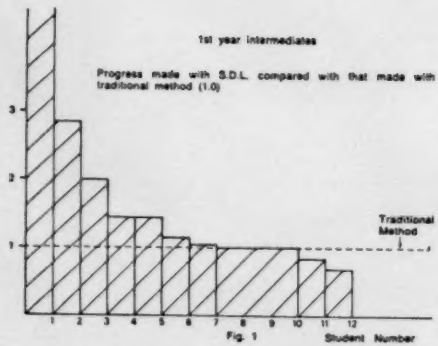
1st year intermediates
Progress made with S.D.L. compared with that made with traditional method (1.0)
Traditional Method
3
2
1
1 2 3 4 5 6 7 8 9 10 11 12
Student Number

Fig. 1

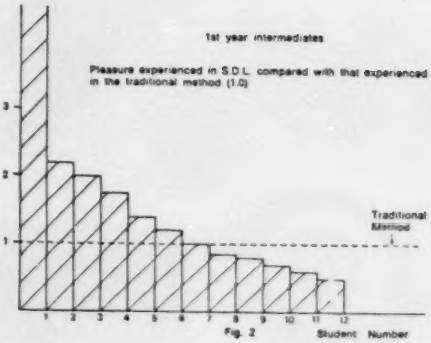
1st year intermediates
Pleasure experienced in S.D.L. compared with that experienced in the traditional method (1.0)
Traditional Method
3
2
1
1 2 3 4 5 6 7 8 9 10 11 12
Student Number

Fig. 2

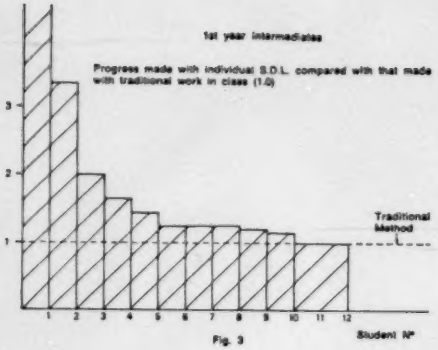
1st year intermediates
Progress made with individual S.D.L. compared with that made with traditional work in class (1.0)
Traditional Method
3
2
1
1 2 3 4 5 6 7 8 9 10 11 12
Student N°

Fig. 3

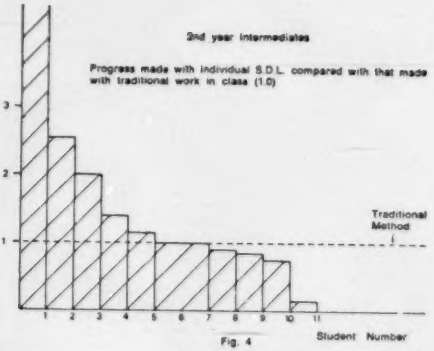
2nd year intermediates
Progress made with individual S.D.L. compared with that made with traditional work in class (1.0)
Traditional Method
3
2
1
1 2 3 4 5 6 7 8 9 10 11
Student Number

Fig. 4

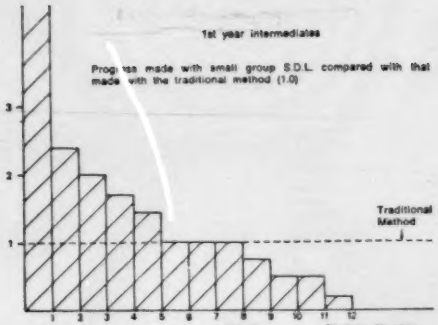
1st year intermediates
Progress made with small group S.D.L. compared with that made with the traditional method (1.0)
Traditional Method
3
2
1
1 2 3 4 5 6 7 8 9 10 11 12
Student Number

Fig. 5

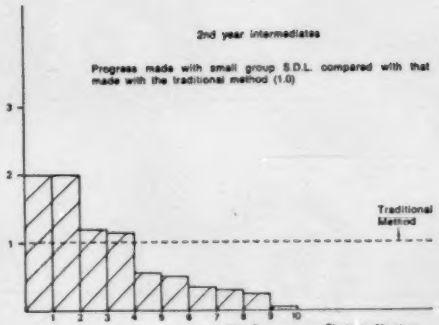
2nd year intermediates
Progress made with small group S.D.L. compared with that made with the traditional method (1.0)
Traditional Method
3
2
1
1 2 3 4 5 6 7 8 9 10
Student Number

Fig. 6

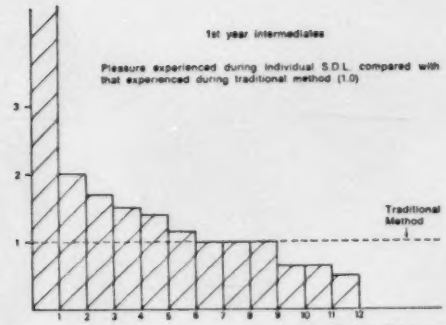
1st year intermediates
Pleasure experienced during individual S.D.L. compared with that experienced during traditional method (1.0)
Traditional Method
3
2
1
1 2 3 4 5 6 7 8 9 10 11 12
Student Number

Fig. 7

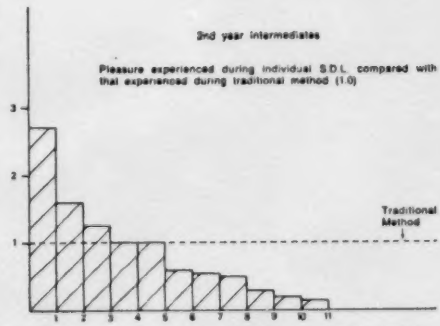
2nd year intermediates
Pleasure experienced during individual S.D.L. compared with that experienced during traditional method (1.0)
Traditional Method
3
2
1
1 2 3 4 5 6 7 8 9 10 11
Student Number

Fig. 8

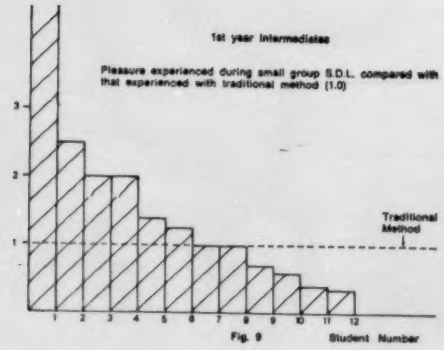
1st year intermediates
Pleasure experienced during small group S.D.L. compared with that experienced with traditional method (1.0)
3
2
1
Traditional Method
1 2 3 4 5 6 7 8 9 10 11 12
Student Number

Fig. 9

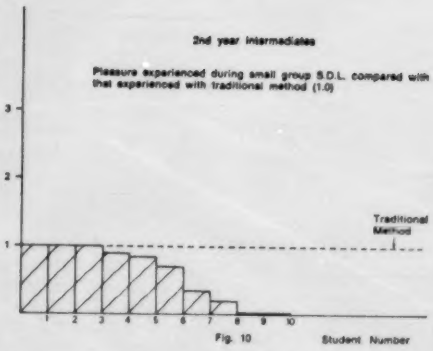
2nd year intermediates
Pleasure experienced during small group S.D.L. compared with that experienced with traditional method (1.0)
3
2
1
Traditional Method
1 2 3 4 5 6 7 8 9 10
Student Number

Fig. 10